

play embodiment, angle **704** and range **714** correspond to the specifications of an electronic media display device. Both viewers **716** and **720** are shown as within viewing envelope **700**. However, viewer **720** has his or her eyes **722** closed, or may be turned around looking the other way. For example, a viewer may be sleeping. Viewer **716** has his or her eyes **718** open. In an alternative embodiment, an intruder analysis module such as intruder analysis module **308** may use this information in determining if a viewer is an intruder. For example, if a red eye response cannot be determined for a viewer, that viewer may not be classified as an intruder. As shown in FIG. 7, viewer **716** would be classified as an intruder, but viewer **720** would not. As an example, algorithms that may be used to detect open eyes include red-eye response algorithms, and other facial recognition algorithms.

[0070] Referring to FIG. 8, a schematic diagram of shows electronic media display device **802**, sensor **806**, processing circuit **300** (as is shown in FIG. 3), and visibility envelope **800**. According to an exemplary embodiment, the electronic media display device is part of an ATM machine. Sensor **806** may be a camera that is coupled to the ATM machine, and processing circuit **300** may be the processing components of the ATM machine. User **810** is shown as operating the ATM machine, and viewer **812** is shown as being within visibility envelope **800**. Contents of electronic media display device **802** are shown as blurred **814**. By automatically blurring the contents of the display, sensitive content can be protected from being viewed by unauthorized viewers. Similar embodiments are also useful in situations where sensitive content is displayed. For example, a medical display device that displays or gathers information about a user's medical history.

[0071] Referring to FIG. 9, a flow diagram of a process **900** for detecting an intruding viewer of a camera-equipped electronic media display device and editing content is shown, according to an exemplary embodiment. Process **900** includes capturing an image of the electronic media display device's surroundings using a camera (step **902**), determining a visibility envelope (step **904**), and analyzing the captured image and visibility envelope information to determine if an intruder is present (step **906**). If a viewer is present (step **908**), and the viewer is within the visibility envelope (step **910**), and the content on the screen is not already edited (step **912**), the content on the electronic media display device is edited or changed (step **914**). However, if the viewer is not determined to be an intruder, and the content is already edited (step **918**), it is safe to reset any previous edits and display unedited content again (step **916**). If an intruder is detected and the content is already edited, no further action needs to be taken (step **912**).

[0072] Referring to FIG. 10, a flow diagram of a process **1000** for detecting an intruding viewer of camera-equipped electronic media display device and editing content according to a user preference file is shown, according to an exemplary embodiment. Process **1000** includes receiving a user preference data file (step **1002**), capturing an image of the electronic media display device's surrounding using the camera (step **1004**), determining a visibility envelope (step **1006**), and analyzing the captured image and visibility envelope information to determine if an intruder is present (step **1008**). If a viewer is present (step **1010**), and the viewer is within the visibility envelope (step **1012**), and the content on the screen is not already edited (step **1014**), content on the electronic media display device is edited or changed (step **1016**). However, if the viewer is not determined to be an intruder, and the

content is already edited (step **1020**), it is safe to reset any previous edits and display unedited content again (step **1018**). If an intruder is detected and the content is already edited, no further action needs to be taken (step **1014**).

[0073] Referring to FIG. 11, a flow diagram of a general process **1100** for detecting and reacting to an intruding viewer of an electronic media display device is shown according to an exemplary embodiment. Process **1100** includes obtaining information from a sensor (step **1102**), determining a visibility envelope based on the sensor and input information (step **1104**), performing analysis to determine a presence of an intruder within the visibility envelope (step **1106**), and editing or changing content on a display device if an intruder is detected (step **1108**).

[0074] Referring to FIG. 12, a flow diagram of a process **1200** for performing intruder analysis is shown, according to an exemplary embodiment. Process **1200** includes detecting all viewers of a display device (step **1202**) and performing the following steps for each detected viewer: determining the viewers range from the display device (step **1204**), determining the viewer's angle with respect to the display device (step **1206**), performing additional analysis (step **1208**), and comparing the analyzed information to a visibility envelope to determine if the viewer is an intruder and is a threat to the display device's content (step **1210**). Step **1208** may include performing additional operations in addition to those performed in steps **1204** and **1206**. For example, a system may be configured to perform red eye analysis to determine if a viewer can see the display. As another example, a system may be configured to adjust a visibility envelope according to user preferences. As another example, a system may be configured to take the display's brightness or content type into consideration. As another example, a system may be configured to take the display's size and the average quality of human eyesight into consideration.

[0075] Referring to FIG. 13, a schematic diagram of shows electronic media display device **1300**, intruding camera **1302** attached to building **1306**, and user **1306**. According to an exemplary embodiment, electronic media display device **1300** is a cellular phone equipped with a camera **1308** (e.g., electronic media display device **402** of FIG. 4), which is configured to scan for intruding cameras according to systems and methods described herein. The processing circuit of electronic media display device **1300** receives data from camera **1308** relating to the environment around electronic media display device **1300**. The processing circuit (via the intruder analysis module) analyzes the information to determine the presence of intruding camera **1302**. The processing circuit (via the edit generation module) edits or changes content on electronic media display device **1300** in response to detecting intruding camera **1302**. For example, the processing circuit may blur the contents of the display or cause an alert to appear, thereby notifying user **1306** of the intrusion. In this manner, sensitive content can be protected from being captured by unauthorized cameras. It should be understood that the application is not limited to detecting cameras attached to buildings, and that other scenarios are envisioned. For example, electronic media display device **1300** may detect another cellular phone equipped with a camera. Similar embodiments are also useful in public locations or while a user is taking public transportation, where intruding cameras are likely to be present.

[0076] Referring to FIG. 14, a flow diagram of a general process **1400** for detecting and reacting to an intruding viewer